

Corporate and market analysis

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8. Methods for analyzing a company's internal and external environment

- **Company and competitor analysis:** Comparative analysis of the strengths and weaknesses of your company and competitors
- **SWOT analysis:** Analyze a company from the perspective of strengths, weaknesses, opportunities, and threats
- **Management analysis/financial analysis:** Analyze a company's profitability, stability, and growth potential using financial statements, etc.
 - **Company analysis:** Analyze the overall situation of a company from multiple perspectives
 - **Competitor analysis:** Analyze the strategies, products, market position, etc. of competitors
 - **Competitor and company market share analysis:** Analyze changes in market share and understand the competitive situation
- **Access analysis:** Comparative analysis of website access to your company and competitors

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A competitor analysis offers several benefits

- Understanding industry standards so that you can meet and exceed them
- Discovering untapped niche markets
- Differentiating products and services
- Fulfilling customers' desires and solving their problems better than competitors
- Distinguishing your brand
- Standing out in your marketing
- Measuring your growth

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Market share

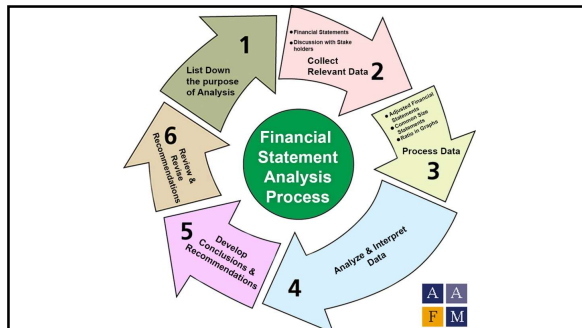
```
# Visualize market share
plt.bar(competitor_data['Company name'],
competitor_data['Market share'])
plt.title('Comparison of competitors' market shares')
plt.xlabel('Company name')
plt.ylabel('Market share')
plt.show()
# Other competitor analysis methods can be performed in the
same way.
```

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Business analysis

- In general business analysis, a company's financial data is used to **evaluate profitability, financial soundness, growth**, etc.:
- As an example of analyzing financial data with Python, we will show simple code using Pandas and Matplotlib → Data is a CSV format file
- Install Pandas and Matplotlib.
pip install pandas matplotlib

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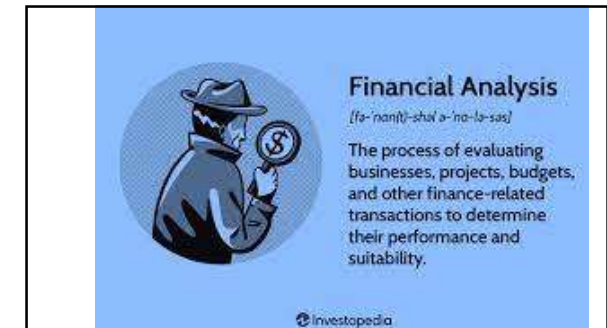


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Financial analysis

- Financial analysis calculates various indicators from a **company's financial statements**.
- Calculate three financial indicators: **profit margin, asset turnover, and ROA (Return of Asset: A ROA of over 5% is generally considered good. Over 20% is excellent)**, and visualize their trends using Matplotlib.
- In financial analysis, appropriate indicators vary depending on the company's condition and industry, so it is important to consider various indicators as needed.

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Customer forecasting:

<https://learn.microsoft.com/en-us/azure/architecture/ai-ml/idea/next-order-forecasting>

- To show the code for customer forecasting, we need specific requirements, such as what kind of data you want to use to make the prediction, the type of prediction model, and the use of specific libraries.
- We will show an example of predicting **future customer numbers** using simple time series data.
- We will use a time series forecasting library called Prophet.
- Install Prophet.
pip install fbprophet

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Methods to Estimate Future Customer Numbers

Method	Data Needed	When to Use
Lead Conversion	Leads, close rate	Direct sales, clear pipeline
Time Series Analysis	Historical customer data	Stable or growing customer base
Market Sizing (TAM/SAM/SOM)	Demographics, market data	New products, market entry
Regression Modeling	Multiple variables	Complex, data-rich environments
Demand Forecasting	Surveys, sales history	Consumer goods, fluctuating demand

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Prophet

- Convert time series data into a format suitable for Prophet and train the Prophet model to predict **future visitor numbers**.
- Data preprocessing and model adjustment are required to suit the actual data and requirements.
- There are various other methods for visitor forecasting, and the appropriate method varies depending on the specific scenario → It is important to select a model according to the nature of the data and the forecast period.

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Company/competitor analysis

- Analyses of your own company and competitors are diverse, and different methods are required depending on the specific purpose and data.
- As an example of a typical company/competitor analysis, the Python code example uses pandas and matplotlib to make a simple comparison based on churn data.

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Company/competitor analysis

- The monthly sales data of the company and its competitors are compared in a line graph.
- The data is fictitious and needs to be replaced with actual data.
- Competitor and company analysis includes many aspects, including not only sales but also market share, customer satisfaction, product feature comparison, and advertising effectiveness comparison.
- Appropriate data and methods must be selected according to the purpose.

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SWOT analysis

- SWOT analysis (Strengths, Weaknesses, Opportunities, Threats) is a framework for evaluating the internal strengths and weaknesses and external opportunities and threats of an organization or project.
- SWOT analysis is primarily used to organize non-quantitative information and understand the strategic direction of an organization.
- This is not an example of how to conduct a SWOT analysis using Python, but a code that shows the concept of SWOT analysis.

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SWOT analysis

- Organize the elements of SWOT analysis in a list and display them according to their respective categories.
- Because SWOT analysis has a strong subjective aspect, it is important to organize information and exchange opinions with team members. → It is common to consider the policies and strategies of an organization or project based on the results of a SWOT analysis.

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Business analysis

- In general business analysis, a company's financial data is used to evaluate profitability, financial soundness, growth, etc.: As an example of analyzing financial data with Python, we will show simple code using Pandas and Matplotlib → Data is a CSV format file
- Install Pandas and Matplotlib.
pip install pandas matplotlib

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Financial analysis

- Financial analysis calculates various indicators from a company's financial statements.
- Analyze financial data with Python.
- Calculate and visualize some basic financial indicators using Pandas and Matplotlib.
- Calculate three financial indicators: profit margin, asset turnover, and ROA, and visualize their trends using Matplotlib.
- In financial analysis, appropriate indicators vary depending on the company's condition and industry, so it is important to consider various indicators as needed.

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Competitive analysis

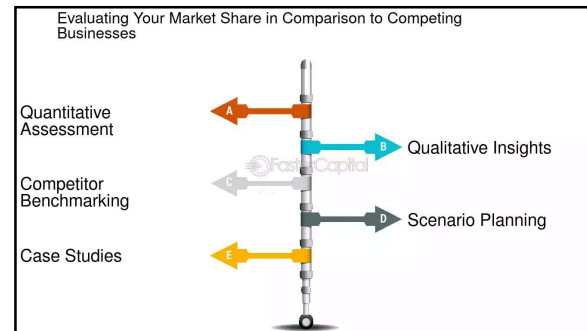
- Competitive analysis is a method to **identify your company's strengths and areas for improvement compared to competitors** and major players in the market.
- This is not an example of how to conduct competitive analysis using Python, but a simple code that shows the concept of competitive analysis.
- A specific competitive analysis requires competitor data and market data.

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Market share, sales, and customer satisfaction

- Compare your company's **market share, sales, and customer satisfaction** with those of your competitors.
- In an actual competitive analysis, it is necessary to collect more detailed information and market trend data and analyze the differences with your competitors in detail.
- Through competitive analysis, you can understand your positioning and points of differentiation in the market and establish a competitive advantage.

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Access analysis

- To perform access analysis, it is necessary to use appropriate libraries and tools according to the specific data and purpose.
- Typical access analysis tools include Google Analytics.
- Easy access analysis using Python

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Access analysis

- Create a line graph using access count data by date
- In actual access count analysis, it is common to use data obtained from Google Analytics or other web analytics tools
- When using Python, use libraries such as Pandas, Matplotlib, and Seaborn to organize and visualize data
- If you want to obtain and analyze Google Analytics data using Python, you can use the Google Analytics API (prior setup and authentication are required to use the API)

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3C analysis

- 3C analysis (Company, Customer, Competitor Analysis) is a method for companies to analyze their own company, customers, and competitors.
- It is difficult to provide a specific example of 3C analysis using Python code: Because 3C analysis includes subjective aspects, it is difficult to express it in simple code based on numerical data and algorithms.
- General guidelines for conducting analysis focusing on each C → Use this as a reference to select an analysis method according to your specific issues and goals.

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8-1 Company Analysis: Analytical methods for evaluating the company itself include financial analysis, SWOT analysis, value chain analysis, etc.

Example of corporate analysis: Calculate profit margin using financial data

```
import pandas as pd
# Load financial data
financial_data = pd.read_csv("path/to/your/financial/data.csv")
# Calculate profit margin
financial_data['Profit margin'] = (financial_data['Profit'] / financial_data['Chuuuuu']) * 100
# Visualize profit margin, etc.
# Other corporate analysis methods can be performed in the same way
```

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8-2 Customer Analysis: To understand customer needs and behavior, market research, customer feedback analysis, segmentation, etc. are effective.

Example of customer analysis: customer segmentation

```
import pandas as pd
from sklearn.cluster import KMeans
# Load customer data
customer_data = pd.read_csv("path/to/your/customer/data.csv")
# KMeans clustering for segmentation
kmeans = KMeans(n_clusters=3)
customer_data['segment'] = kmeans.fit_predict(customer_data[['number of purchases', 'average purchase amount']])
# Analysis by segment
# Other customer analysis methods can be performed in the same way
```

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8-3 Competitor Analysis: Competitor analysis is important for understanding the strengths and weaknesses of your competitors and comparing their market shares and strategies.

- # Example of competitor analysis: Comparing competitors' market shares
- import pandas as pd
- import matplotlib.pyplot as plt
- # Loading competitor data
- competitor_data = pd.read_csv("path/to/your/competitor/data.csv")
- # Visualizing market share
- plt.bar(competitor_data['Company name'], competitor_data['Market share'])
- plt.title('Comparing competitors' market shares')
- plt.xlabel('Company name')
- plt.ylabel('Market share')
- plt.show()
- # Other competitor analysis methods can be performed in the same way